


Difractómetro de Electrones para la Determinación Estructural de Materia Nanocrystalina

 **Timeline** | 01/2022 to 06/2023

 **ICIQ People** | [Jordi Benet](#)

 **Budget** | 1,495,000 €

 **X-Ray Diffraction Unit**

 **Call** | [Equipamiento Científico-Técnico 2021](#)

SUMMARY

The aim of this action is the acquisition of an Electron Diffractometer that would allow, starting from nanocrystals, the structural determination of all types of materials, including drugs, natural products, pigments, zeolites, semi-conductors, MOFs, COFs as well as minerals. Its availability as a dedicated system would represent a breakthrough that will allow the development of future projects in many fields of science. An electron diffractometer is a novel piece of equipment, just came out on the market, existing until 2021 only as a prototype, which allows the structural determination of samples at a scale unattainable for conventional or synchrotron techniques. It combines an electron source, its lenses, a vacuum chamber and a sample cooling system; with a goniometer and a two dimensional, 2D detector. The objective of this acquisition is to promote all ICIQ research lines, Electron Diffraction (ED) being of vital importance for the characterization of the crystalline solids generated there. The ED service would be open to the BIST research groups, as well as to users of the various centers and universities in the rest of the country, such as the Universities of Girona, the Balearic Islands or the Rovira i Virgili in Tarragona. It would also be key for the ICIQ's Crysforma Technological Development Unit, which works on solid state research in pharmaceutical products.

WORK PLAN

Acciones	Mes																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A1. Estudio de los equipos en el mercado	█																	
A2. Escritura del concurso público		█																
A3. Publicación y resolución del concurso público			█	█	█	█	█											
A4. Tiempo de entrega del equipo							█	█	█	█	█	█	█	█				
A5. Estudio del espacio más idóneo para la instalación									█	█								
A6. Adecuación del espacio de laboratorio y las instalaciones											█	█	█					
A7. Instalación del equipo															█			
A8. Formación del personal a cargo del equipo																█	█	
A9. Redacción del formulario de acceso y de los documentos con la información acerca del equipo																	█	
A10. Puesta en marcha del servicio																		█